

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a —.

Abbot, Charles [Greeley].

The sun. New York. 1911. xxiv, 447 p. ill. 8°.

Askinazi, V. O.

Miestnyâ meteorologicheskâ steti v Rossii k nachalu 1912 goda. [Local meteorological réseaus in Russia at the beginning of 1912] n. t. p. 30 p. 4°. (Imper. ac. sci., St. Petersburg. [Publication.]

O parallel'nykh nablûdeniakh. [On parallel observations.] S.-Peterburg. 1912. cover-title. 18 p. 4°.

Batavia. Koninklijk magnetisch en meteorologisch Observatorium.

Verhandelingen. No. 1. Die Wind-Verhältnisse in den oberen Lufschichten, nach Ballonvisierungen in Batavia; von W. van Bemmelen. Batavia. 1911. 77 p. plate. 4°.

Verhandelingen. No. 2, I. Drachen- und Fesselballon-Beobachtungen. II. Wissenschaftliche Ergebnisse der Aufstiege mit dem Freiballone "Batavia"; von C. Braak. Batavia. 1912. 46 p. plate. 4°.

Brocke, Albert.

Blitz, Gewitter und Blitzableiter, volkstümlich erläutert. [Bernburg.] [1911?] cover-title. 8 p. 8°.

Der Windmühlen-Blitzableiter. (Reprint; Deutscher Müller, Bernburg, 31. Jahrg., 11. Aug. 1911. p. 293-4.)

Blitzableiter für Holländer-Mühlen. (Reprint; Deutscher Müller, Bernburg, 32. Jahrg., No. 9, 1. März 1912.)

Denmark. Danske meteorologiske Institut.

Annuaire magnétique, 1907-08. Copenhague. 1911. 25 p. 5 pl. f°.

Populær Vejledning til Benyttelse af Vejrkort. Kjøbenhavn. 1911. viii, 78 p. 8°.

Ghent. Université. Station de géographie mathématique.

Annuaire météorologique, 1911-12, Année 5. Roulers. 1912. 87 p. 12°.

Gorczyński, Władysław.

Materyały do poznania opadów w Królestwie Polskiem (okres 1901-1910) . . . Précipitations observées en royaume de Pologne pendant la période 1901-1910. Avec un supplément contenant les précipitations à Varsovie (1803-1910) et à Jedrzejow (1886-1905). [Polish text. Polish and French title-page.] Warszawa. 1912. xxv, 157 p. 8°. (Publication, Soc. sci. Varsovie, III.-Cl. sci. math. et nat. Comm. météorol.)

O opadach w Warszawie. Sur les précipitations à Varsovie. [Polish text. Résumé in French.] Warszawa. 1911. 8°. (Reprint; Comptes rendus, Soc. sci., Varsovie, 1911, fasc. 8, p. 349-386.)

O zmienności opadu według obserwacji Warszawskich od 1803 r. Sur la variabilité des précipitations d'après les observations faites à Varsovie depuis 1803. [Polish text. Résumé in French.] Warszawa. 1911. 8°. (Reprint; Comptes rendus, Soc. sci., Varsovie, 1911, fasc. 9, p. 453-485.)

[Hunter, Walter D., & Pierce, W. Dwight.]

Mexican cotton-boll weevil. Washington. 1912. 188 p. 22 pl. 8°. (U. S. Bur. entomology, bull. 114.) [Climatic control of the boll weevil is discussed on pp. 120-132.]

International union for cooperation in solar research.

Transactions, v. 3. [Mt. Wilson meeting, 1910.] Manchester. 1911. viii, 231 p. 8°.

Italy. Ufficio centrale meteorologico e geodinamico.

Annali, ser. 2a. Vol. 19, pt. 2, 1897. Roma. 1911. iv, 275 p. f°. Annali, ser. 2a. Vol. 20, pt. 2, 1898. Roma. 1911. viii, 265 p. f°. Elenco delle pubblicazioni . . . 1860-1910. Roma. 1911. 24 p. 4°.

Koch, I. P., & Wegener, A[lfred].

Die glaciologischen Beobachtungen der Danmark-Expedition. København. 1911. 77 p. ill. 4°. (Reprint; Meddelelser om Grønland 46.) [Includes measurements of air temperatures within the cave of the glacier Gnipa north of Danmarks-Havn, Greenland].

Kraus, Gregor.

Boden und Klima auf kleinstem Raum. Versuch einer exakten Behandlung des Standorts auf dem Wellenkalk. Jena. 1911. vi, 184 p. 8 pl. 8°.

McAdie, Alexander [George.]

The clouds and fogs of San Francisco. San Francisco. 1911. 106 p. plates. 8°.

Maryland. Geological survey.

Prince George's county. Baltimore. 1911. 251 p. Atlas. 4°. [The climate of Prince George's county, Md., by W. H. Alexander, p. 185-206.]

Negro, Carlo.

La meteorologia nel folk-lore. Roma. 1911. 49 p. 4°. (Reprint; Mem. Pontific. accad. Rom. dei nuovi Lincei, v. 29.)

Osservazioni sulla rugiada, nota preliminare. n. t. p. 7 p. 4°. (Reprint; Atti, Pontific. accad. Rom. dei nuovi Lincei, anno 65, sess. 2, 21 Gennaio, 1912.)

Uno studioso di proverbi meteorologici sul principio del 1800 [Vassalli-Eandi]. n. t. p. 10 p. 4°. (Reprint; Atti, Pontific. accad. Rom. dei nuovi Lincei, anno 65, sess. 1, 17 Dic. 1911.)

New York meteorological observatory, Central Park.

Annual report, 1911. New York. 1911. 149 p. 2 appendices. 4°. [Beginning July 1, 1911, this observatory became a branch of the Local Office, U. S. Weather Bureau.]

Prussia. Königliches preussisches meteorologisches Institut.

Bericht über die Tätigkeit, 1911. Berlin. 1912. 190 p. 4°. (Veröffentlichung, Nr. 244.)

San Fernando. Instituto y observatorio de marina.

Añales. Sección 2. Observaciones meteorológicas, magnéticas y sismicas, 1910. San Fernando. 1911. viii, 164 p. f°.

U. S. Weather bureau.

Monthly weather review, 1910, v. 38. Washington. 1911. vi, 1927 p. plates. f°.

Venice. Ufficio idrografico.

Carte annuali delle piogge nella regione Veneta per il 1909 e 1910. Venezia. 1911. 29 p. 2 maps. 4°. [Rainfall maps for 1909 and 1910 for the lower valley of the Po.]

Voller, A.

Das Grundwasser in Hamburg . . . Beobachtungen aus dem Jahre 1910. Hamburg. 1911. 7 p. 3 pl. f°. (Beihett zum Jahrbuch der Hamburgischen wissensch. Anstalten, Bd. 28, 1910.)

Wagner, Gotthold.

Die Änderung des Luftdruckes im anomalistischen Monat. Leipzig. 1912. 8°. (Reprint; Beiträge zur Geophysik, 11. Bd., p. 276-313.) [An analysis of the barometric records at Batavia seems to reveal a lunar influence.]

Zágrub (Agram). Meteorologisches Observatorium.

Jahrbuch, 1904, Teile 1, 2. Zágrub. 1912. 101 p. f°.

Jahrbuch, 1909, Teil 3, Niederschläge in Kroatien und Slavonien im Jahre 1909. Zágrub. 1911. 50 p. f°.

Jahrbuch, 1910, Teil 3, Niederschläge in Kroatien und Slavonien im Jahre 1910. Zágrub. 1912. 48 p. f°.

RECENT PAPERS BEARING ON METEOROLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and other cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

American journal of science. New Haven. 4 ser. v. 33. May, 1912.

Burbank, J. E. One phase of microseismic motion. p. 470-473. [Discusses relations of microseisms to movements of "highs" and "lows."]

Burbank, J. E. Microseisms caused by frost action. p. 474-475.

- Astrophysical journal.* Chicago. v. 35. May, 1912.
- Humphreys, W[illiam] J[ackson]. On "earthlight," or the brightness, exclusive of starlight, of the midnight sky. p. 273-278.
- Country gentleman.* Philadelphia. v. 77. 1912.
- Wells as barometers. p. 3. (May 4.)
- Frazer, Calvin. Every farmer his own weather bureau. How a few simple instruments will aid weather studies. p. 7. (May 18.)
- The advance of agriculture. What science is doing for farmers. p. 11. (May 18.)
- Frazer, Calvin. The thirst of the air. p. 19. (May 18.) [Describes investigations and apparatus of B. E. Livingston.]
- Geographical journal.* London. v. 39. April, 1912.
- Unstead, J[ohn] F. The climatic limits of wheat cultivation, with special reference to North America. p. 347-366.
- International Institute of agriculture. Bureau of agricultural intelligence and of plant diseases. Bulletin.* Rome. 3d year. 1912.
- Klein, P. A. A new series of agricultural meteorology in France. p. 607-610. (March.) [Abstract.]
- Mercanton, P. L., & van Ufford, Quarles. Electric niagaras. (A propos des niagaras électriques.) p. 867-888.
- London, Edinburgh, and Dublin philosophical magazine.* London. v. 23. April, 1912.
- Darwin, C. G. The effects of the diurnal rotation on the upper atmosphere. p. 664-668.
- Nature.* London. v. 89. 1912.
- Gregory, R. A. Cycles of the sun and weather. p. 147-149. (April 11.)
- Palmer, Andrew H. Glazed frost. p. 192. (April 25.)
- Nautical magazine.* Glasgow. v. 87. May, 1912.
- The detection of icebergs at sea. p. 521-524.
- Physical society. Proceedings.* London. v. 24. April 15, 1912.
- Schuster, Arthur. A critical examination of the possible causes of terrestrial magnetism. p. 121-137.
- Page, T. W. Krypton and the auroral spectrum. p. 138-140.
- Science.* New York. v. 35. May 24, 1912.
- Ward, Robert DeC. Abbott Lawrence Rotch. p. 808-811.
- Seismological society of America. Bulletin.* Stanford university. v. 2. March, 1912.
- Drake, Noah Fields. Destructive earthquakes in China. p. 40-91. [Discusses relations of meteorology of China to earthquakes.]
- Terrestrial magnetism and atmospheric electricity.* Baltimore. v. 17. March, 1912.
- Gockel, Albert. Ueber den elektrischen Strom Erde-Luft und seinen Zusammenhang mit den Erdströmen und den Schwankungen des erdmagnetischen Feldes. p. 1-20.
- Nippoldt, Alfred. Die Verteilung der Leitfähigkeit der Atmosphäre ueber dem grossen Ozean, nach den Beobachtungen der "Galilee." p. 33-41.
- U. S. Department of Agriculture. *Yearbook.* Washington. 1911.
- Cox, Henry J. The Weather Bureau and the cranberry industry. p. 211-222.
- Day, P. C. The winds of the United States and their economic uses. p. 337-350.
- Thiessen, Alfred H. The value of snow surveys as related to irrigation. p. 391-396.
- Western society of engineers. Journal.* Chicago. v. 17. April, 1912.
- Boardman, H. P. Wind pressure against inclined roofs. p. 331-359.
- Académie des sciences. Comptes rendus.* Paris. Tome 154. 1912.
- Perrotin, Henri. Essai de représentation de la température en fonction de la nébulosité. p. 1014-1016. (15 avril.)
- Violle, J. Mesures actinométriques pendant l'éclipse du 17 avril. p. 1017-1018. (22 avril.)
- Angot, Alfred. Observations faites pendant l'éclipse du 17 avril 1912. p. 1118-1120. (22 avril.)
- Le Baume-Pévinet, A. de. Sur l'observation de l'éclipse de soleil du 17 avril 1912. p. 1139-1140. (29 avril.)
- Jouast, R., & Le Gorco, P. de. Mesures d'éclairement faites pendant l'éclipse du 17 avril 1912. p. 1141-1142. (29 avril.)
- Nature.* Paris. 40. année. 6 avril 1912.
- Loisel, J. Comment on mesure la chaleur que nous recevons du soleil. p. 307-309.
- Société météorologique de France. *Annuaire.* Paris. 59. année. Novembre-décembre 1911.
- Blin, E. Remarques météorologiques anciennes faites dans les communes qui composent le département de l'Yonne. p. 319-337.
- Durand-Gréville, E. La loi des crochets de grain. p. 309-318.
- Annalen der Hydrographie und maritimen Meteorologie.* Berlin. 40. Jahrgang. 1912.
- Perlewitz, Paul. Bestimmung der Windrichtung und Windgeschwindigkeit in der Höhe aus den Beobachtungen von Pilotballonen. p. 177-180. (Heft 4.)
- Annalen der Hydrographie und maritimen Meteorologie.* Berlin. 40. Jahrgang. 1912.—Continued.
- Perlewitz, Paul. Die Windverhältnisse in den oberen Luftschichten nach Ballonvisierungen zu Batavia nach Dr. van Bemmelen. p. 181-187. (Heft 4.)
- Exner, Felix M. Zur Kenntnis der untersten Winde über Land und Wasser und durch die erzeugten Meeresströmungen. p. 226-239. (Heft 5.)
- Jentsch, —. Orkan im Indischen Ozean. p. 239-241. (Heft 5.)
- Jentsch, —. Taifun im südchinesischen Meer vom 26. September bis 5. Oktober 1911. Nach einem Bericht des Dampfers "Sachsen," Kapt. A. Wagner. p. 241-245. (Heft 5.)
- Gesellschaft für Erdkunde. Zeitschrift.* Berlin. Nr. 3. 1912.
- Baschin, Otto. Die Erreichung des Südpols durch Amundsen. p. 161-165. [Includes temperature data; lowest -159° C.]
- Jahrbuch der Radioaktivität und Elektronik.* Leipzig. 9. Band, Heft 1. 1912.
- Becker, Anton. Über die Elektrizitätsentwicklung durch Änderung flüssiger Oberflächen in Gasen. p. 52-111.
- Himmel und Erde.* Berlin. Jahrgang 24. April, 1912.
- Wegener, Alfred. Die Erforschung der obersten Schichten der Erdatmosphäre. p. 289-310.
- Königlich preussisches meteorologisches Institut. *Veröffentlichungen.* Berlin. Nr. 244. 1911.
- Hellmann, Gustav. Über die Aufstellung der Thermometer zur Bestimmung der Lufttemperatur. p. 59-83.
- Wagner, Karl Willy. Über systematische Fehler bei der Messung der Lufttemperatur auf Schiffen, besonders in den Tropen und einige andere Beobachtungen. p. 83-95.
- Schwalbe, G., & Kassner, C. Der heisse und trockene Sommer 1911 in Norddeutschland. p. 96-109.
- Hellmann, Gustav. Witterungsfolge nach heissen Sommern in Berlin. p. 109-115.
- Kähler, Karl. Staubmessungen in Potsdam, auf dem Brocken und auf der Schneekoppe. p. 137-148.
- Knoch, Karl. Ergebnisse der Temperatur- und Feuchtigkeitsregistrierungen an nahe benachbarten Turmstationen. p. 148-157.
- Bötel, Th. Psychrometer-Studien zu Hildesheim. p. 158-168.
- Marten, Wilhelm. Zur Frage der Sonnenscheinautographen und der Zuverlässigkeit ihrer Angaben. p. 168-179.
- Budig, Walter. Einige Bestimmungen der Radioaktivität der Luft und der Hydrometeore auf dem Brocken. p. 179-184.
- Budig, Walter. Mechanische Registrierung des mit Aetino-Elektroden gemessenen luftelektrischen Potentialgefälles. p. 185-190.
- Meteorologische Zeitschrift.* Braunschweig. Band 29. April 1912.
- Hann, Julius v. W. van Bemmelen: Die Windverhältnisse in den oberen Luftschichten nach Ballonvisierungen in Batavia. p. 145-150.
- Lenard, P., & Ramsauer, C. Über die Wirkungen ultravioletten Lichtes auf Gase unter besonderer Berücksichtigung der Vorgänge in der Erdatmosphäre. p. 150-157.
- Hann, Julius v. Hepworth und Shaw über die Passate des Atlantischen Ozeans und das Klima von St. Helena. p. 157-163.
- Wallenböck, R. Die klimatischen Unterschiede auf Nord- und Südeichen in ihrer Beziehung zum Wassergehalte des mit Altholz bestandenen oder abgestockten Waldbodens. p. 164-166.
- Hopfner, Friedrich. Zur Frage stellarer Ursachen von Klimaschwankungen. p. 169-170.
- Aganin, M. Über die Simpsonsche Gewittertheorie. p. 171-173.
- Wegener, Kurt. Randgebiete tiefen Luftdruckes. I. p. 178-181.
- Arroyo, E. Almeida. Windfahne mit Dämpfung. p. 181.
- Schwalbe, Gustav. Über die bei der Reduktion der Temperatur auf das Meeressniveau für Norddeutschland erreichbare Genauigkeit. p. 181-184.
- Petermanns Mitteilungen. Gotha. 58. Jahrgang. März 1912.
- Nölke, Friedrich. Wurde die Eiszeit durch eine Temperatur-niedrigung hervorgerufen oder nicht? p. 121-124.
- Die Wirkung der grossen Hitze- und Dürrezeit 1911 auf die Seenverdunstung. p. 124-126.
- Hess, Hans. Die temporäre Schneegrenze in den schweizer Alpen p. 148-149. [Abstract of 3 articles by Maurer.]
- Physikalische Zeitschrift.* Leipzig. 13. Jahrgang. 15. April 1912.
- Knoche, Walter. Bestimmung der elektrischen Zerstreuung der Ionendichte und -geschwindigkeit, sowie der elektrischen Leitfähigkeit der Luft zwischen der chilenischen Küste und der Osterinsel. p. 322-332.
- Weltall. Berlin. 12. Jahrgang. 2. Märzheft. 1912.
- Grosse, Ernst. Astrometeorologie. p. 172-177.
- Wetter. Berlin. 29. Jahrgang. März 1912.
- Hamann, L. Hitze und Trockenheit im Sommer 1911 im Grossherzogtum Hessen. p. 49-56.

Wetter. Berlin. 29. Jahrgang. März 1912—Continued.

Grosse, —. Über die Messung der Luftherneuerung in geheizten Räumen. p. 56-58.

Meissner, Otto. Noch einige Bemerkungen über das Klima von Potsdam. p. 62-64.

Diesner, P. Hochwasser-Nachrichten aus der Südosthälfte Asiens im Sommer 1911. p. 64-67. [Describes storms and rainy weather in many parts of Asia coinciding with the period of heat and drought in Europe.]

Liese, G. Brummen der Telegraphendrähte. p. 69.

Less, E[mil]. Über die Aufstellung besonderer Wetterprognosen von kurzer Geltungsdauer. p. 70-76. [Describes arrangements in Germany for short-period afternoon and evening forecasts for aeronauts.]

Koninklijk Nederlandsch meteorologisch instituut. Mededeelingen en verhandelingen. Utrecht. Nr. 12. 1912.

Gallé, P. H. Etude critique sur la méthode de prévision du temps de Guilbert. p. 3-25.

Académie impériale des sciences. Bulletin. St. Pétersbourg. 6 sér. no. 4. 1912.

Strokovskii, V. A. Sur le climat de Urumci. p. 341-360.

Sociedad Cubana de ingenieros. Revista. Habana. v. 4. Abril 1912.

Brodermann, Jorge. Observaciones mareográficas y meteorológicas en el puerto de Isabela de Sagua. p. 89-119.

Società meteorologica Italiana. Bollettino bimensuale. Torino. v. 31. Dicembre 1911-Gennaio 1912.

Gentile, Carlo, & Parodi, Roberto. Por lo studio delle correnti elettro-telluriche. p. 1-6.

Negro, Carlo. Questionelle sulla precipitazione atmosferica. p. 6-10.

REORGANIZATION OF GOVERNMENT METEOROLOGICAL WORK IN CHILE.

On January 1, 1911, the meteorological services of Chile were united under the direction of Dr. Walter Knoche, the director of the newly established "Instituto Central Meteorológico y Geofísico de Chile." The meteorological stations formerly under the minister of education were transferred to the care of Dr. Knoche on May 1, 1910, and the service lately under the minister of marine was similarly transferred on January 1, 1911. Complete instrumental outfits were at once ordered for both the Central Observatory and the country stations, and it is probable that they are now well equipped. It is difficult to secure many reliable observers at present, but it is planned to establish observing stations as well distributed as possible over the whole country; the agricultural and industrial districts in the south of the Republic to be especially cared for.

Four orders of stations are to be established, as follows:

First order stations.—Completely equipped with self-registering instruments. These stations will be located at Punta Arenas, Valdivia, Santiago, Valparaiso, a mine in Atacama, and a temporary station on Easter Island.

Second order stations.—Equipped with barograph, thermograph, hygrograph, and pluviograph.

Third order stations.—Having a full equipment for direct eye observations, the readings to be made at 7^h, 14^h, and 21^h.

Fourth order stations.—Recording temperature and precipitation only, these to be supplemented by a larger number of "precipitation-thunderstorm" stations.

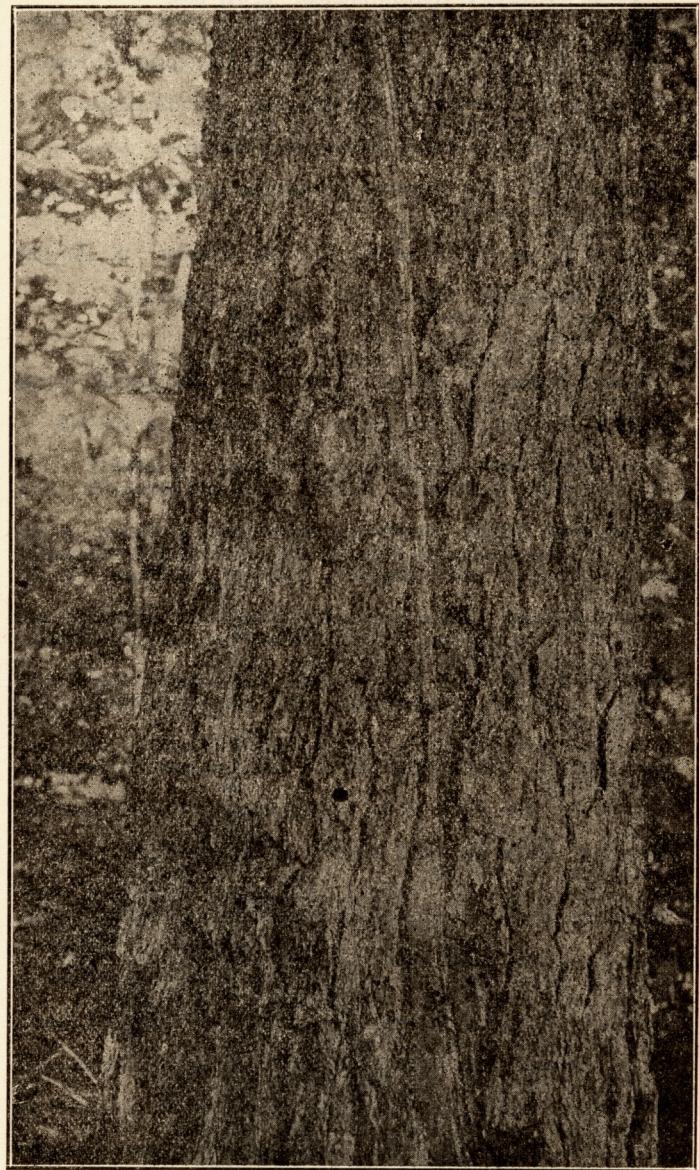
Plans are making for investigations in atmospheric electricity, complementary to those made during 1909 in the Bolivian Andes by Dr. Knoche. It is also hoped that there will soon be provided means for carrying on studies in the physics of the atmosphere, aerology, etc. At present there are neither funds for apparatus nor the necessary trained assistants to prosecute such work effectively.

A PECULIAR STROKE OF LIGHTNING.

A letter from Mr. Norman N. Mason, Plattsburg, N. Y., dated April 29, 1912, contains the following ac-

count of what appears to have been a most unusual illustration of the peculiar action of lightning. The accompanying reproduction of a photograph showing the track of the discharge down a portion of the tree struck, graphically illustrates the usual character of the stroke:

I inclose a photographic print of the track of a lightning discharge on the trunk of a pine tree. This tree stands to the left and very near the road to Willsboro Point just after passing the McCann house going north in Willsboro, Essex County, N. Y. The two tracks are alike in section and appear to be of uniform depth, width, and distance between



"Track of a peculiar lightning discharge on the trunk of a tree."

the two tracks. The cross section of each single track resembles the letter U, with the bottom of the curve in the sap wood which is hardly splintered. Each track looks as if it had been cut with a sharp gouge. Pieces of the outer cork bark were thrown more than 60 feet from the tree. With a good glass I can discover no broken branches or other injury to the tree except this double track. The track from the top of the tree to the ground passes in the opposite direction to the movement of the hands of a watch, nearly once and a quarter times around the tree. The double track is thirteen-sixteenths of an inch wide. The tree was struck at 9 p. m., September 25, 1909. There was apparently but one discharge at that time.